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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/516,464

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Takashi Matsuda

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EXAMINER

VIDWAN, JASJIT S

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/516,464

Applicant(s)

MATSUDA ET AL.

Examiner

Jasjit S. Vidwan

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. 5/25/06.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

Claims 16-30 are pending

Claims 1-15 have been cancelled as per documents submitted 5/10/06

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 16-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16, 26 and 28 recite "said adapter body and said card receiver are **substantially** coplanar." It is unclear of the metes and bounds intended to cover by this limitation. The specification does not provide support for the term "substantially." Therefore this limitation is vague and indefinite.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Eisele et al U.S.

Patent: 6,89,459 [herein after Eisele].

5. **As per claim 16**, Eisele teaches a card adapter [**Fig. 11a, element 1171**] for coupling a compact memory card [**Fig. 11b, element 118**] to a card receiver, comprising:

- a. An adapter body insertable along a first direction into a card receiver [**Fig. 3, Element 302**], said body having an inlet for receiving along a second direction a compact memory card

**[Fig. 11a, Element 123]**, said first and second directions being orthogonal **[Fig. 11a, element 113 and 119]**, said adapter body and said card receiver are coplanar **[Fig. 11a]**,

A circuit board within said body, said circuit board comprising:

- (i) A first connector connecting said card adapter to said card receiver **[Fig. 11a, Element 113]**
- (ii) A second connector connecting said card adapter to said compact memory card **[Fig. 11a, Element 119]**; and
- (iii) A circuit coupling said first connector and the second connector for converting signals between the first and second connectors **[Fig. 11a, Elements 115-117]**.

6. **As per claim 25**, Eisele teaches a card adapter wherein the circuit board connects the first connector and the second connector electrically, and mounts a circuit to convert a pin arrangement **[Fig. 7a, Element 701 and 510-513]**.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisele et al, Patent No: 6,089,459 **[herein after Eisele]** and further in view of Mizutani et al. U.S. Patent No: 5,777,275 **[herein after Mizutani]**.

9. **As per claim 17**, Eisele teach the limitations of claim 16, in addition to circuit board wherein the circuit board mounts the first connector **[Fig. 7a, Element 510]**, the second connector **[Fig. 7a, Element 701]**, and the signal processing circuit **[Fig. 7a, elements 511-513]**, in the same surface **[Fig. 7a]**.

Eisele fails to teach a system wherein the circuit board has a foldable surface. However, Mizutani teaches a system wherein there exists a foldable surface [see Mizutani, Fig. 1, Element 3b], in order to effectively increase the areas of the flat portions of the circuit board [Col. 2, Lines 9-11].

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous to include a circuit board that includes the functionality of being able to fold within itself in order to reduce the space restrictions of more compact adapter. It is for this reason that one of ordinary skill in the art would have been motivated to combine Eisele's teachings with that of Mizutani in order to take advantage of providing a smaller and more compact memory card adapter.

10. **As per claim 18**, Eisele as modified by Mizutani above teaches a circuit board comprising a main board [see Mizutani, Fig. 4, Element 1a] and sub-board [see Mizutani, Fig. 4, Element 1b] with a flexible bend [see Mizutani, Fig. 3, Element 3] to connect main board and the sub-board, and is folded at the flexible bend to insert into the card holder [see Mizutani, Fig. 3, Element 3], and the main board and the sub-board faces each other in the card case [see Mizutani, Fig. 3, elements 1a-1b].

11. **As per claim 19**, Eisele as modified by Mizutani above teaches:

A Sub-board that mounts the first connector and the second connector in a same surface [see Mizutani, Col. 4, Lines 23-28].

A Main board mounts the signal processing circuit in the same surface [see Mizutani, Fig. 5 elements 2a].

The first connector and the second connector are connected via the signal processing circuit [see Eisele, Fig. 7a, elements 511-513].

12. **As per claim 20**, Teachings of Eisele as modified by the teachings of Mizutani as applied above, teach a card adapter wherein at least one of the main board and the sub-board in a folded structure has an opening equal to or wider than the holder in a portion corresponding to the holder [see Mizutani, Fig. 3, There exists a considerable distance between boards 1a and 1b].

13. **As per claim 21**, Teachings of Eisele as modified by the teachings of Mizutani as applied above, teach a card adapter wherein the main body is L-shaped and is positioned on the second connector housing when the main board is folded [see Mizutani, Fig. 5, element 1b].

14. **As per claim 22**, Teachings of Eisele as modified by the teachings of Mizutani as applied above, teach a card adapter wherein the holder is formed between one surface of the card case and the sub-board [see Mizutani, Fig. 4, element 3].

15. **As per claim 23**, Teachings of Eisele as modified by the teachings of Mizutani as applied above, teach a card adapter wherein the holder is formed by one surface of the card case, the sub-board and the housing of the second connector [see Mizutani, Fig. 4, element 3].

16. **As per claim 24**, Teachings of Eisele as modified by Mizutani teach a system wherein the main board and sub-board when folded will still maintain a distance from the second connector. Using Mizutani's teaching of folding the signal processor circuit (main board) with first connector (sub-board) [see Mizutani, Fig. 3].

17. **As per claims 26 and 28**, Eisele teaches all the limitations of claims 26 and 28 in claim 16, except for a holder for the compact memory card inserted from the inlet, wherein the circuit board mounts a signal processing circuit, the first connector and the second connector on one surface, and has a structure enable to fold until both of the circuit boards face each other, and wherein the circuit board in a folded structure where the both circuit boards face each other is bonded to the body with insulating adhesives to keep a distance between both of the folded circuit boards in a prescribed dimension.

However, Mizutani teaches a system wherein there exists a foldable surface [see Mizutani, Fig. 1, Element 3b], in order to effectively increase the areas of the flat portions of the circuit board [see Mizutani Col. 2, Lines 5-11]. Also, Mizutani goes further to teach a card case where the circuit board support is provided on a housing of the second connector to keep a distance between both of the folded circuit boards in a prescribed dimension [see Mizutani Fig. 3, There exists a considerable distance between boards 1a and 1b]. Also, Mizutani teaches a card adapter where the main board is bonded inside of the top surface via an insulating adhesive layer and the sub-board inside of the bottom surface via the adhesive layer [See Mizutani, Col. 3, Lines 19-29].

One of ordinary skill in the art at the time of applicant's invention would have clearly recognized that it is quite advantageous to include a circuit board that includes the functionality of being able to fold

within itself in order to reduce the space restrictions of more compact adapter. One of ordinary skill in the art would have also recognized the need to add insulating adhesive layer on both the main and sub-boards in order to prevent electrical disrupt when the boards are in extremely close proximity of one another in the folded stage. It is for this reason that one of ordinary skill in the art would have been motivated to combine Eisele's teachings with that of Mizutani in order to take advantage of providing a smaller and more compact memory card adapter and prevent shortage of the electrical system.

18. **As per claims 27 and 30**, Eisele as modified by Mizutani above teach a card adapter wherein the circuit board connects the first connector and the second connector electrically, and mounts a circuit to convert a pin arrangement [see Eisele, Fig. 7a, Element 701 and 510-513].

19. **As per claim 29**, Eisele as modified by Mizutani above teach a card adapter where the main board is bonded inside of the top surface via an insulating adhesive layer and the sub-board inside of the bottom surface via the adhesive layer [See Mizutani, Col. 3, Lines 19-29].

#### ***Response to Arguments***

12. Applicant's arguments with respect to claims 16-30 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasjit S. Vidwan whose telephone number is (571) 272-7936. The examiner can normally be reached on 8am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSV  
5/25/06

  
**KIM HUYNH**  
**SUPERVISORY PATENT EXAMINER**  
5/26/06